

What is claimed is:

1. A method of predicting the propensity of a subject to develop an autoimmune disorder, comprising measuring i) the number or level of indicator T cells or ii) the activity of the indicator cells present in the subject as determinative of the propensity of a subject to develop an autoimmune disorder.
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2. A method of diagnosing an autoimmune disorder comprising, measuring i) the number or level of indicator T cells or ii) the activity of the indicator cells present in the subject in order to diagnose an autoimmune disorder.
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3. A method of predicting the efficacy of treatment for an autoimmune disorder comprising, measuring i) the number or level of indicator T cells or ii) the activity of the indicator cells present in the subject as determinative of the efficacy of treatment for an autoimmune disorder.
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4. The method of any of claims 1-3, wherein the number or level of indicator T cells is measured using an antibody that recognizes T and NK-T cell surface markers selected from a group consisting of: i) an antibody that recognizes CD3 in combination with an antibody that recognizes at least one of CD69, CD94, and CD161; ii) an antibody that recognizes a TCR variable gene expressed region preferentially expressed by NK-T cells in combination with an antibody that recognizes at least one of CD69, CD94, and CD161; and iii) an antibody that recognizes a TCR variable gene expressed region preferentially expressed by NK-T cells in combination with an antibody that recognizes CD3 and an antibody that recognizes at least one of CD69, CD94, and CD161.
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5. The method of claim 4, wherein the antibody that recognizes a TCR variable region preferentially expressed by NK-T cells recognizes V $\alpha$ 24 and V $\beta$ 11 and J $\alpha$ Q.
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6. The method of any of claims 1-3, wherein the number or level of indicator cells is measured by detecting CD4+/CD25+ T cells that are CD122 or CD132 negative.

7. A method of predicting the propensity of a subject to develop an autoimmune disorder comprising: i) determining the number or level of indicator T cells in a biological test specimen, obtained from the subject, and ii) comparing the number or level of the indicator cells from the biological specimen to the number or level of the indicator cells in a control, wherein the presence of a reduced level of the indicator cells in the test specimen relative to the control is indicative of an increased propensity for the subject to develop an autoimmune disorder, to thereby predict the propensity of a subject to develop an autoimmune disorder.

8. A method of predicting the propensity of a subject to develop an autoimmune disorder comprising:

- i) contacting a biological specimen comprising indicator T cells obtained from a subject with one or more agents that stimulate cytokine production by the indicator cells,
- ii) determining the level of cytokines produced by the indicator cells, and
- iii) comparing the level of cytokines produced by the indicator cells to a control, wherein production of lower levels of cytokines by the indicator cells obtained from the subject is indicative of an increased propensity for the subject to develop an autoimmune disorder, to thereby predict the propensity of a subject to develop an autoimmune disorder.

9. A method of determining the effectiveness of treatment for of autoimmune disorder comprising:

- ii) determining the number or level of indicator T cells in the biological specimen obtained from a subject undergoing treatment for an autoimmune disorder, and
- ii) comparing the number or level of the indicator cells from the biological specimen to the number or level of indicator cells in a sample collected from the subject prior to treatment, wherein the presence of an increased number or level of the indicator cells in the specimen from the subject is indicative of effectiveness of the treatment, to thereby determine the effectiveness of treatment for an autoimmune disorder.

10. A method of determining the effectiveness of treatment for of autoimmune disorder comprising:

- i) contacting indicator T cells in a post treatment biological specimen obtained from a subject undergoing treatment for an autoimmune disorder with one or more agents that stimulate indicator cell cytokine production,
- ii) determining the level of cytokines produced by the indicator cells, and

iii) comparing the level of cytokines from the post treatment biological specimen from the subject to the level cytokines in a sample collected from the subject prior to treatment, wherein the presence of an increased level of cytokines in the post treatment specimen is indicative of effectiveness of the treatment, to thereby determine the effectiveness of treatment for an autoimmune disorder.

5 11. The method of any of claims 1-3, wherein the cytokines are Th1 cytokines.

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10 12. The method of any of claims 1-3, wherein the cytokines are Th2 or TH3 cytokines.

13. A method of preventing the development of an autoimmune disorder in a subject comprising, administering an enhancing agent to the subject.

14. The method of claim 13, wherein the subject is known to be at risk for the development of an autoimmune disorder

15. The method of claim 13, wherein the subject is not known to be at risk for the development of an autoimmune disorder.

20 16. A method of ameliorating the symptoms of an ongoing autoimmune disorder in a subject comprising administering an enhancing agent to the subject.

25 17. The method of claim 13 or 16, wherein the enhancing agent is a bacterium or is a substance derived from a bacterium.

18. The method of claim 13 or 16, wherein the enhancing agent is administered orally.

30 19. The method of claim 18, wherein the enhancing agent is a bacterium from the genus *Lactobacillus*.

35 20. The method of claim 13 or 16, wherein the enhancing agent is derived from a bacterium belonging to a genus selected from the group consisting of: *Mycobacteria*, *Bordatella*, *Corynebacterium*, *Streptococcus*, or *Hemophilus*.

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21. The method of claim 20, wherein the enhancing agent is administered orally.

22. The method of claim 20, wherein the enhancing agent is lipopolysaccharide.

23. The method of claim 20, wherein the enhancing agent is in the form of a bacterial cell lysate.

24. The method of claim 20, wherein the enhancing agent is a purified or recombinant bacterial antigen.

25. The method of claim 20, wherein the enhancing agent is lipo-arabinomannan (LAM).

26. The method of claim 20, wherein the enhancing agent is an  $\alpha$ - galactosyl-ceramide.

27. The method of claim 13 or 16, wherein the autoimmune disorder is selected from the group consisting of: hay fever, allergic rhinitis, and asthma.

28. A kit for predicting the propensity of a subject to develop an autoimmune disorder or the effectiveness of a treatment for an autoimmune disorder comprising a detection reagent selected from the group consisting of: at least one antibody which recognizes a cell surface marker on an indicator cell and a probe that recognizes a nucleic acid molecule present in an indicator cell.

29. The kit of claim 28, further comprising at least one detection reagent that recognizes a cytokine.

30. The kit of claim 28, further comprising a means for isolating peripheral blood mononuclear cells.

*add B<sup>3</sup>*